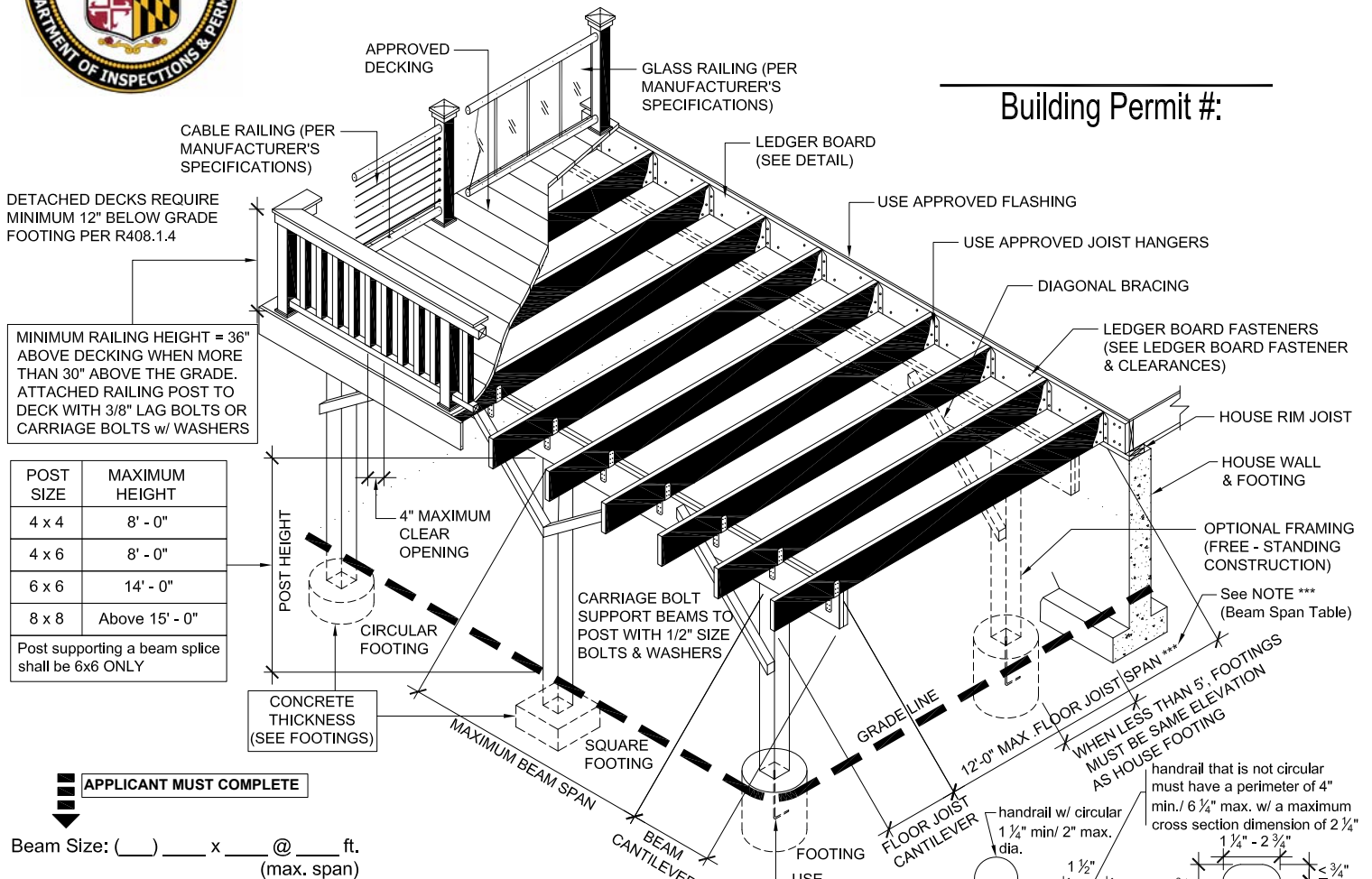




DECK CONSTRUCTION GUIDE

2018 International Residential Code

Building Permit #:



APPLICANT MUST COMPLETE

Beam Size: () x () @ () ft.
(max. span)

BEAM SPAN TABLE

BEAM SIZE	MAXIMUM BEAM SPAN
2 (2 x 6)	5' - 0"
2 (2 x 8)	6' - 0"
2 (2 x 10)	7' - 6"
2 (2 x 12)	8' - 6"

NOTE ***
Beam floor loads at mid-span in excess of 6'-0" will require beam upgrade or intermediate beams. Provide layout drawings to scale showing footing & beam location. Southern Pine #2 (pressure treated)

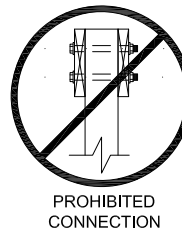
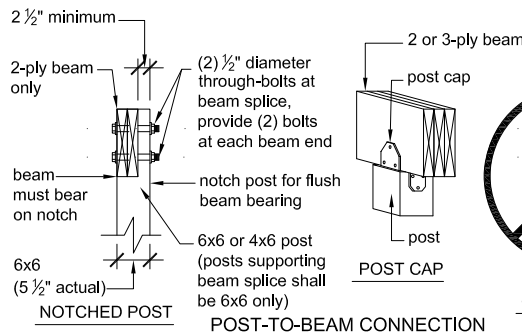
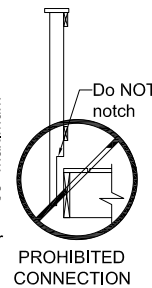
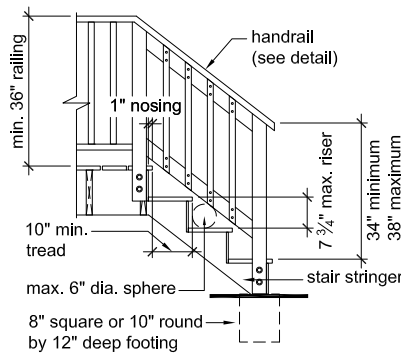
APPLICANT MUST COMPLETE

Floor Joist: () x () @ ()" o.c.
Floor Joist Cantilever: () feet

FLOOR JOIST SPAN TABLE

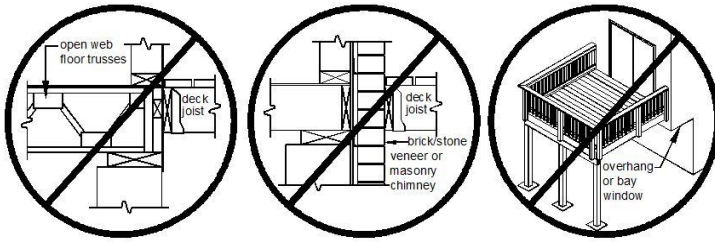
Floor Joist Size	FLOOR JOIST SPACING			Maximum Cantilever
	12"	16"	24"	
(2 x 6)	9' - 11"	9' - 0"	7' - 7"	NOT ALLOWED
(2 x 8)	13' - 1"	11' - 10"	9' - 8"	2 feet
(2 x 10)	16' - 2"	14' - 0"	11' - 5"	3 feet
(2 x 12)	19' - 1"	16' - 6"	13' - 6"	4 feet

NOTE:
Lumber species & grade = Southern Pine #2 (pressure treated)



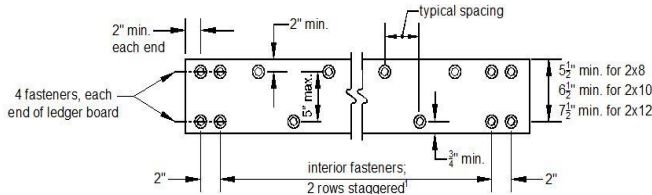
- PLAN VIEW fasteners & attachment per hold-down manufacturer
- GUARD POST-TO-END JOIST
- HANDRAILS
- 1 1/2" min.
- 1 1/2" min.
- 34" - 38" nosing of stairs
- 2x blocking
- guard post or wall
- corrosion-resistant handrail hardware
- NOTES:
1. All footings must rest on undisturbed soil.
 2. Minimum footing size: 16" square or 18" Sonotube (See Table 4).
 3. DO NOT attach deck ledger to overhanging floor system or a 2nd beam is required.
 4. Corrosion resistant fasteners required for all connections.
 5. Decks are NOT APPROVED for future hot tubs.
 6. Maintain min. 30 feet separation from well.
 7. DO NOT support framing loads on existing chimney.
 8. Guardrails shall be designed for lateral load of 200 lbs. applied at any point along top rail.
 9. Basement door headroom clearance = 6'-8" min.
 10. Basement egress window path = 36" min.

PROHIBITED LEDGER ATTACHMENTS



LEDGER BOARD FASTENER SPACING & CLEARANCES

1 Additional interior fasteners are required at chimney or bay window



LEDGER BOARD FASTENER SPACING, ON CENTER

Fastener	Band Board	Joist Span less than or equal to:							
		6'	8'	10'	12'	14'	16'	18'	
Lag Screws	EWPI	24"	18"	14"	12"	10"	9"	8"	
	2x lumber	30"	23"	18"	15"	13"	11"	10"	
Through Bolts	EWPI	24"	18"	14"	12"	10"	9"	8"	
	2x lumber	36"	36"	34"	29"	24"	21"	19"	
Wood Screws ²	1" EWPI	18"	13"	11"	9"	8"	7"	6"	
	2x lumber	19"	14"	11"	9"	8"	7"	6"	
Expansion Anchors	—	36"	36"	34"	29"	24"	21"	19"	
Adhesive Anchors	—	32"	32"	32"	24"	24"	16"	16"	

1 EWP = 1 inch minimum manufactured engineered wood product

2 Wood screws shall be permitted to be spaced in accordance with its corresponding evaluation report if less than the values in TABLE above

Through-bolts. Through-bolts shall have a minimum 1/2-inch diameter. Pilot holes for through-bolts shall be 17/32 to 9/16 inches in diameter. Through-bolts must be equipped with washers at the bolt-head and nut. Bolts should be tightened six to 12 months after construction due to drying and wood shrinkage.

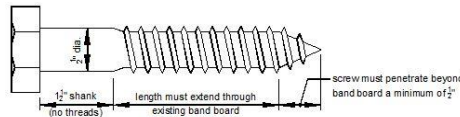
Expansion anchors. Expansion anchors shall be used only when attaching a ledger board to a concrete or solid masonry wall. The bolt or threaded rod of expansion anchors shall have a 1/2-inch diameter minimum; in some cases, this may require a 5/8-inch anchor size. Expansion anchors must be installed per manufacturer's instructions and shall be equipped with washers.

Adhesive anchors. The adhesive anchors with a minimum 1/2-inch diameter threaded rod shall be used when attaching to hollow masonry. Adhesive anchors are also permitted with concrete or solid masonry installations. Anchors shall be installed per manufacturer's instructions and shall be equipped with washers. Adhesive cartridges must remain on the jobsite for inspector verification.

APPROVED ADHESIVE ANCHORS

Manufacturer	Product
ITW Ramset/Red Head	Epcon Acrylic 7
Hilti	HY-20

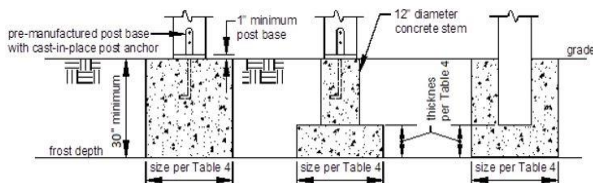
APPROVED WOOD SCREWS



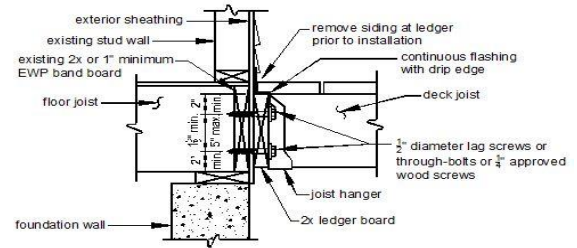
Wood Screws. Approved wood screws listed above with a 1/4-inch diameter may be used to attach to wood-framed construction. Wood screws shall have a sufficient length to fully penetrate the existing house band board. Installation shall be in conformance with the manufacturer's instructions.

Manufacturer	Product
FastenMaster	LedgerLok
Simpson Strong-Tie	Strong-Drive Screws (SDS, SDW)

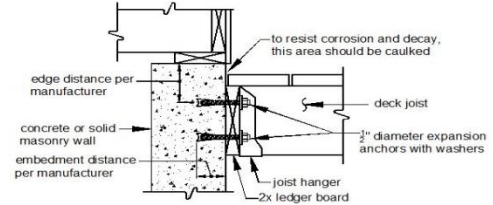
FOOTINGS



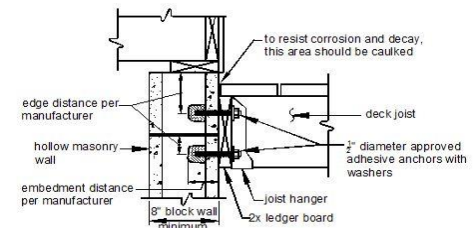
LEDGER BOARD-TO-BAND BOARD ATTACHMENT



LEDGER BOARD-TO-SOLID FOUNDATION ATTACHMENT



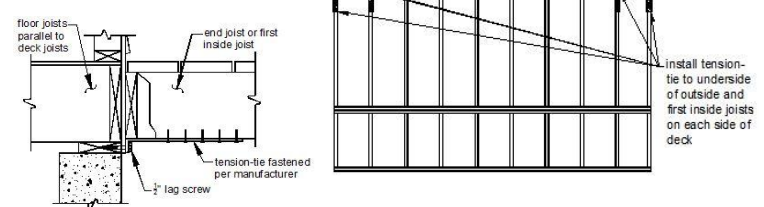
LEDGER BOARD-TO-HOLLOW FOUNDATION ATTACHMENT



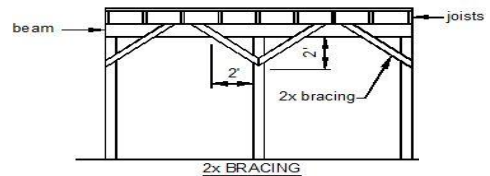
LATERAL SUPPORT

All decks greater than 30 inches above grade must resist lateral load using one of the applicable methods noted below:

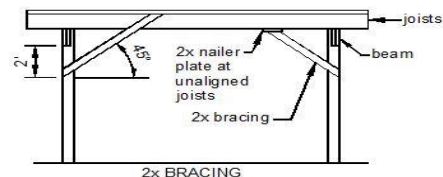
METHOD 1) Tension-ties:



METHOD 2) Diagonal bracing:



DIAGONAL BRACING AT BEAM-POST LOCATION



DIAGONAL BRACING AT JOIST-POST LOCATION

TABLE 4: FOOTING SIZE				
Beam Span less than or equal to:	Joist Span less than or equal to:	Size of Square	Size of Round	Minimum Thickness
8'	10'	16"	18"	8"
	14'	20"	22"	8"
	18'	22"	24"	8"
12'	10'	16"	18"	8"
	14'	20"	22"	8"
	18'	22"	24"	10"
17'	10'	22"	24"	10"
	14'	22"	24"	10"